

Regional Development in Şanlıurfa Province, the Center of South Eastern Anatolian Project (GAP): Key Sector Analysis

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Abstract

The challenges facing Şanlıurfa are not unique, they are the same challenges found in rural areas all around the world. Agriculture is still the most important sector in Şanlıurfa, but it is generating fewer and fewer jobs. New approaches used in regional development shift from a focus on individual sectors (such as agriculture policy) to one based on a comprehensive **multisectoral** approach in which agriculture is conceived as one component sector of a comprehensive regional development policy.

Within this framework, there are two major aims of this study. **The first aim** is to identify the **high point sectors (key industries)** by using LQ analysis in Şanlıurfa province and 11 districts. The analysis encompasses all sectors of industry and services thus excluding agriculture. On the other hand the economy of Şanlıurfa, endowed with very rich arable land resources and irrigation facilities, thanks to GAP-(South Eastern Anatolian Project), is mainly based on agriculture. Accordingly **the second aim** of this paper is to analyze the development potentials of “**clusters of agro-industries based on organic agriculture products**” in the region.

The findings of the analysis reveal that the key sectors identified in industry and services (food and textiles industries and retail and wholesale of food stuff) provide inputs from the main agricultural products in the region. On the other hand considering the availability of land and other facilities for organic agricultural products the findings of the study strongly supports development of “clusters of organic - agro industries” in Şanlıurfa Region.

Socio-Economic Profile of Şanlıurfa Province

Among the 26 NUTS 2 regions defined by State Planning Organization in the framework of regional development policies, Şanlıurfa is grouped together with Diyarbakır under the code TRC2. At NUTS 3 level its code is defined as TRC21. Map 1 shows 9 Provinces of the south eastern Anatolia.

Map 1: Şanlıurfa in South East Anatolia Region



The surface area of Şanlıurfa located in Southeastern Anatolia Region of Turkey is 19.020 km² and this constitutes 3% of the total surface area of Turkey (Bulu and Eraslan, 2004). Şanlıurfa is the Center City of GAP project. Şanlıurfa is surrounded by Gaziantep in the west, Adıyaman in the northwest, Diyarbakır in the northeast, Mardin in the east, and Syria in the south. There are 11 districts including the central district. These are Akçakale, Birecik, Bozova, Ceylanpınar, Halfeti, Harran, Hilvan, Suruç, Siverek and Viranşehir.

Demographic Structure

As it may be seen in **Table 1**, total population including the central province and districts is 1,443,42 according to 2000 census. Population growth rate is 30.9 (%), far above the average of Turkey (14.9 %). On the other hand the average size of a household in the province is higher than 4.5, the average of Turkey. It is 6.87. Namely, approximately 7 persons live in a house. When the distribution according to age is considered, the province has a quiet young population. 0-4 age group has the biggest share within population. It is estimated that the population of Şanlıurfa will reach 1.9 million in 2010 through this rapidly growing population.

Table 1: Demographic Indicators - 2000

<i>Codes</i>	<i>Total Population</i>	<i>Urban population growth rate %</i>	<i>Population growth rate (‰) 2004</i>	<i>Population density</i>	<i>Total Fertility Rate (‰)</i>	<i>Household average-person</i>
Türkiye-TR	67,803,9	64,9	14.9	86	2,53	4,5
South East Anatolia-TRC	6,608,619	62,69	21.23	86	4,57	6,48
Şanlıurfa, Diyarbakır-TRC2	2,806,130	59,15	24.6	80	4,68	6,76
Şanlıurfa-TRC21	1,443,42	58,34	30.9	75	4,83	6,87
Diyarbakır-TRC22	1,627,08	60	18.4	87	4,51	6,64
Zonguldak-TR811	615,599	40,66	-10,08	186	1,93	4,23
İstanbul-TR100	10,018,73	90,69	30,73	1,885	1,97	3,93

Source: TÜİK, DPT, Annual Statistical Reports.

The economy of Şanlıurfa is based on agriculture. As it may be seen in **Table 1 and 2** nearly 42% of the population live in rural area. Urbanization rate decreases down to 30% in the districts except the central district. However, with 58% urbanization rate, the province is below the average of Turkey which is %65.

Table 2: Population Breakdown of the Provinces of Şanlıurfa

<i>Name of District</i>	<i>Total Population</i>	<i>Urban population</i>	<i>Share of urban population in total %</i>
Merkez	534706	385588	72,11
Akçakale	77261	32114	41,57
Birecik	74671	40054	53,64
Bozova	65842	19848	30,14
Ceylanpınar	67817	44258	65,26
Halfeti	34402	2766	8,04
Harran	56258	8784	15,61
Hilvan	38411	16094	41,9
Siverek	224102	126820	56,59
Suruç	82247	44421	54,01
Viranşehir	187705	121382	64,67

Source: TÜİK, DPT, Annual Statistical Reports.

Regarding literacy rate it is very low particularly among women (52%) which is far below the average of Turkey (%80). Another striking issue is the extent of net outmigration in Şanlıurfa (-39 (‰)). Namely, 39 out of 1000 persons migrate from

Şanlıurfa. As it may be seen in **Table 3**, the province with the highest net outmigration is Zonguldak- 74 (%), and Antalya ranks first in term of net immigration. One needs to analyze the structure of the labor market of Şanlıurfa to understand the reasons of outmigration in Şanlıurfa.

Table 3: Migration Data

<i>Codes</i>	<i>Permanent settlement population 2000</i>	<i>In-migration</i>	<i>Out-migration</i>	<i>Net Migration</i>	<i>Growth of Net Migration</i>
Türkiye-TR	60,752,995	40,983,56	40,983,56	0	0
South Eastern-TRC	5,687,740	212,425	4,223,15	-209,890	-36.23
Şanlıurfa,Diyarbakır-TRC2	2,419,448	96,864	194,240	-97,376	-39.45
Şanlıurfa-TRC21	1,243,058	38,320	87,632	-49,312	-38.9
Diyarbakır-TRC22	1,176,390	62,996	111,060	-48,064	-40.04
Antalya-TR611	1,451,771	171,982	81,525	90,457	64.31
Zonguldak-TR811	574,182	27,839	71,848	-44,009	-73.82

Source: TÜİK, DPT, Annual Statistical Reports.

Economic structure and Labour Market

Economic structure of Şanlıurfa is mainly based on the agriculture sector. According to 2000 data, the sectoral breakdown of regions GDP is agriculture (43%), services (40%), industry (11%) and construction (6%). GDP in 2000 is 1 billion 850 Million Dollars, and income per capita is 1.300 Dollars. (**Table 4**). However referring to the labour market data, we see that employment generating capacity of agriculture sector has been declining. As it may be seen in (**Table 6**), in terms of TRC2 -Urfa-Diyarbakir data, employment share of agricultural has declined from 47.4% in 2004 to 26.9% in 2006. On the other hand the share of industry in employment is increasing gradually as it increased from 12.1% in 2004 to 16.2% in 2006.

Table 4: Distribution of GNP by Sector

<i>Codes</i>	<i>Per capita GNP 1995-\$</i>	<i>Per capita GNP 2001-\$</i>
Türkiye-TR	2727	2146
Güneydoğu Anadolu-TRC	1498	1186
Şanlıurfa, Diyarbakır-TRC2	1471	1156
Şanlıurfa-TRC21	1238	1300
Diyarbakır-TRC22	1696	1313
Ağrı, Kars, Iğdır, Ardahan-TRA2	877	730
Kocaeli, Sakarya, Düzce, Bolu, Yalova-TR42	4873	4109

Source: TÜİK, DPT, Annual Statistical Reports.

Table 5: Employment and Labour Force in TRC2 Region

<i>1000 person</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>TRC (2006)</i>
Population	3.05	3.155	3.199	7347
Civilian Population 15 + ages	1.657	1.731	1.782	4214
Labour Force	649	615	575	1452
Unemployed	70	64	69	204
Employment	579	551	505	1248
Unemployment	10.8	10.4	12	14
Labour Force participation rate %	39.2	35.5	32.3	34

Table 6: Distribution of Employment by Sector

<i>Codes</i>		2004			2005			2006		
		Agriculture	Industry	Service	Agriculture	Industry	Service	Agriculture	Industry	Service
Türkiye-TR	Person Thousand	7,400	5,017	9,375	6,493	5,456	10,097	6,088	5,674	10,568
	%	34,0	23,0	43,0	29,5	24,7	45,8	27,3	25,4	47,3
Güneydoğu-TRC	Person Thousand	572	249	635	408	292	673	299	294	654
	%	39,3	17,1	43,6	29,7	21,3	49,0	24,0	23,6	
Şanlıurfa- Diyarbakır TRC2	Person Thousand	275	70	234	210	76	264	136	82	287
	%	47,4	12,1	40,1	38,1	13,8	47,9	26,9	16,2	56,8
Ağrı,Kars,İğdır ,Ardahan TRA2	Person Thousand	209	14	94	201	18	107	172	18	116
	%	65,9	4,4	29,7	61,7	5,5	32,8	56,0	5,9	37,8
İstanbul TR100	Person Thousand	26	1,412	1,880	23	1,527	2,005	19	1,538	2,119
	%	0,8	42,6	56,7	0,6	42,9	56,4	0,5	41,8	57,6

Source: TÜİK, DPT, Annual Statistical Reports.

TÜİK Genel Sanayi ve İşyerleri Sayımı, Geçici Sonuçlarına Göre İl İşyeri Sayısı ve İstihdam, 2005.

Another striking point is that labour force participation rate has been declining in the recent years. The participation rate which was 39% in 2004 decreased to 32% as of 2006 (**Table 5**) Findings of a recent research carried out by State Planning Institute reveals that the number of people who have no hope in finding a job is highest in Şanlıurfa (105,000 people) among all the provinces of Turkey. On the other hand the highest number of people that leave the region for seasonal works is also very high. Declining employment opportunities in agriculture, inadequate access to education and leisure facilities and declining job opportunities in the public sector employment due to recent climate of fiscal restraint are among the main reasons of high rates of outmigration from Şanlıurfa.

Agriculture

Table 7 shows that Şanlıurfa owns rich and plentiful land resources for farming activity. 1.200.572,5 hectares of its 1.858.400-hectare-area constitute the agricultural area of the region. 836.000 hectares of this area is suitable for irrigation. Currently 313.025 hectares of agricultural area can be irrigated. 167.325 hectares of this irrigation is provided by state and 145.700 hectares is provided by the public. Agricultural area of Urfa consists 13% of Turkey's agricultural area and it also constitutes 35% of agricultural area of southeastern region.

Table 7: Total Agriculture Arable Land

<i>Regions</i>	<i>Land Area –Ha</i>	<i>Percentage share %</i>
TRC- South Eastern Anatolia	3.453.464	13 (in Turkey)
TRC 2 Şanlıurfa-Diyarbakır	1.995.235	58 (in TRC)
TRC 21-Şanlıurfa	1.200.572	35 (in TRC)
TRC 22- Diyarbakır	798428	23 (in TRC)

Source: Şanlıurfa Tarım İl Müdürlüğü, Şanlıurfa Sanayi ve Ticaret Odası, TÜİK

Şanlıurfa is one of the major producers of cotton, wheat and barley in Turkey. Other farming products produce are red lentil, pistachio, grape, sesame and various vegetables. After 1995 with the initiation of GAP, there has been a great increase in cotton production; cotton production which was 277.000 tons in 1995 increased to 708,602 tons/year in 2004. (**Table 8**)

Table 8: Agriculture Products Before/After GAP

<i>Before GAP</i>	
<i>Products</i>	<i>Wheat, Lentil, Pistachio, Sesame, Barley</i>
<i>After GAP</i>	
<i>Products</i>	<i>Ton/year</i>
Wheat	1442884
Barley	762767
Lentil	209314
Sesame	5368
Cotton	867790
Corn	18300
Pistachio	42097
Tomato	81507
Aubergine	53352

Source: Şanlıurfa Tarım İl Müdürlüğü

In Turkey, 30% of total cotton production; 11% of total dry legumes production; 6.4% of total barley production; 4% of total wheat production is provided by Şanlıurfa.

Farming of Animals

Sheep and goat farming is at the forefront in terms of husbandry. In spite of the fact that bovine breeding is not at expected levels, it is improving gradually. In 2006, the amount of farmed animals are as follows; sheep and goat 1.584.495 unit/per year,; cattle breeding 144. 848 unit/per year; poultry 1.010.097 unit/per year; bee hive 8.491 unit/per year.

As it may be seen in **Table 9**, almost 2000 tons of meat was produced in the region in 2002.

Table 9: Manufacture of Meat Products (2002)

Products	Amount
Meat (Ton)	8.688
Leather (Unit)	168.573
Milk (Ton)	166.495
Honey (Kg)	90.143

Source: Şanlıurfa Tarım İl Müdürlüğü

Atatürk Dam and Euphrates River offer valuable potentials in terms of fisheries and fish breeding. Total 38,835-hectare of water surface comprises 1430 hectares of ponds and nearly 37,405 hectares of dam area. The potential of this area in terms of fishery products is of great importance. Implantation works carried out to protect and increase available fishery products potential in lakes, pounds and dams, and to make use of the

new resources efficiently have an important impact on the development of fishery in the province. Total production of fishery products is 405 tons as of 2001 in the region, and 30 tons of this figures was provided by aquaculture. As a result of the studies to be carried out in the region it is expected that the production will reach 3700 tons through hunting and 2000 tons through aquaculture. The available production which is 405 tons/year will reach 5700tons/year.

According to a study entitled “**Regional Development Policies in Turkey**” carried out by **TUSIAD**, Urfa-Diyarbakır Region, **among** the 26 NUTS 2 Regions;

- Ranks first **in field crops** (1.6)
- Ranks last **in fruit and vegetable** (0.3)
- Ranks second **in sheep and goat farming after** TRB2 (Bitlis, Hakkari, Van, Muş) (1.77)
- Also ranks among the top provinces in **meat production** (1.78)

A crucial problem in the region is the salting of land due to over irrigation which is also called high ground water. 1.512 hectares of the total land area has already been suffering from this problem. Drainage works and reconstruction works are underway in order to tackle this issue.

To sum up, inspire of the many problems, agriculture still plays an important role in shaping the rural landscape and the regions economy therefore it remains a wellspring of regional support for development. However, this would make sense if agriculture were conceived more as a part of a regional restructuring process towards multisectoral approaches, than as a traditional sector producing commodities.

Industry

While the share of employment in agriculture has been declining, the employment share of industry has been increasing and reached 16.2 % in 2006. The number of the firms employing 2 or more workers in manufacturing sector increased rapidly in recent years and this number is 2.933 as of 2002. With regards the industry sector as a whole (manufacturing, electricity, gas and water and construction) the number of companies and the number of workers are 3138 and 16392 consecutively.

In 1992, contractions works for First Organized Industrial Zone was launched and it was completed in 2000 except waste treatment facilities. 295 industry parcels were allocated to 148 entrepreneurs. As of today, 135 factories are operating, 23 factories are under construction, and 11 factories are in the phase of project. When all of these facilities are completed in 1. Organized Industrial Zone where 4.500 people are employed, in total 8.000 people will be employed.

Since the First Organized Industrial Zone could not meet the demands of high number of entrepreneurs, construction works for the Second Organized Industrial Zone was launched. The total area of 2. Organized Industrial Zone which was included in 1997 investment Programme is 1186 hectares.

Industry and Services Sectors in Şanlıurfa: Key Sector Analysis

Clusters and Key Sector Analysis

The idea that national economic success depends, in part at least, on the development of localised concentrations of industrial specialisation can be traced back more than one hundred years to Alfred Marshall (Marshall, 1949). He argued that Britain's economic growth and leadership during the 19th century was founded on the development of several examples of localised industries. Examples include cotton textiles in Lancashire, the potteries district around Stoke, furniture around High Wycombe, and so on.

A century later, economists have rediscovered Marshall's work on industrial localisation. Their argument is that regional economic agglomeration and specialisation can maximise the potential offered by technological, market and other externalities that underpin increasing returns hence the more geographically localised is an industry within a given nation, the more internationally competitive that particular industry is likely to be (Porter, 1990, 1998; Krugman, 1991, 1993; Antonelli 2003).

Porter's identification of these contemporary local economic agglomerations has been especially influential, and his term 'industrial cluster' has become the standard concept in this field. Porter's concept of 'clusters' (Porter, 1990), originated in his work on international competitiveness argues that the leading exporting firms in a range of different countries are not isolated success stories but belong to successful groups of rivals within related industries. These groups are termed clusters, which refers to industries related by horizontal and vertical links of various kinds.

The definition of Clusters according to M. Porter is as follows:

Clusters are Geographic concentrations of interconnected companies, specialized suppliers, service providers, firms in related industries, and associated institutions (for example, universities, standards agencies, and trade associations) in particular fields that compete but also co-operate" (Porter, 1998.op. cit. page 197)

Accordingly clusters lead to higher growth in three main ways.

-*First*, they raise productivity by allowing access to specialized inputs and employees, by enhancing access to information, institutions, and public goods and by facilitating complementarities.

-*Second*, they increase firms' capacity for innovation by diffusing technological knowledge and innovations more rapidly.

-*Third*, clusters stimulate higher rates of new business formation, as employees become entrepreneurs in spin-off ventures. Over the past few years, the cluster approach has found an audience amongst policy-makers at all levels. The idea is that governments and local authorities can help to provide the business and institutional environment necessary to cluster success. Identifying high point sectors and industries at the regional level is a prerequisite for cluster study.

Over the past few years the cluster approach has found an audience amongst policy-makers at all levels. The idea is that governments and local authorities can help to provide the business and institutional environment necessary to cluster success. In Turkey in the framework of the nation's accession to EU, there has been a number of case studies realized which aim at identifying high point industries at NUTS 1 and NUTS 2 levels. Some of those studies have been analyzed by Akgüngör, Kumral and Lenger (2003), Kumral and Deger (2003), Akgüngör (2003), Kumral and Değer (2004), TUSIAD and DPT (2005). These studies have had significant contributions to Turkey's regional development issues both at theoretical and political levels. However the scope of the majority of such studies is limited to the manufacturing sectors.

High Point Industries (Key Sectors) Analysis in Şanlıurfa

The scope of our study covers the entire industry and services sectors in the Province of Şanlıurfa. It aims at investigating each and every regional sector to determine whether and to what extent they may form high points in the province. Hence the findings of this study is expected to contribute to the previously realized studies

Method

In this study by making use of 4 digit NACE 1.1 codes, employment data belonging to the years of 2002. The specialization and concentration levels for Şanlıurfa Province in the industry sector and services sector have been calculated by using Location Quotient Index.

The fundamental quantitative measure of firm activity we use in Şanlıurfa province is that of employment. We will use a relative measure of employment density known as the location quotient (LQ) as the main technique to determine the degree of localization of a given sector. We used a methodology similar to DTI's application on UK to identify high point industries and clusters (DTI, 2001; 14).

The questions of scale and significance are central to the analysis hence our study attempts to identify the high point sectors in terms of comparative scale; the size of the sector in relation to the relevant sector nationally. Hence all the LQ values of each sector within the industry and services sectors will be calculated. LQ is defined as follows:

$$LQ = (E_{ij}/E_j)/(E_{in}/E_n) \text{ or } LQ = (E_{ij}/E_{in})/(E_j/E_n)$$

E_{ij} employment in industry in region j ,

E_j is total employment in region j ,

E_{in} is national employment in industry i , and E_n is total national employment relative to the region's share of a given industry's national employment.

Firstly, LQ values have been calculated that high point industries of individual region.

The LQ values will measure the share of a given industry's employment in Şanlıurfa relative to the region's share of total national employment.

An LQ greater than 1.5 indicates that there is an above average proportion of employment in a given industry in a given region. Conversely for an LQ of less than 1.5. Those sectors with an LQ value greater than 1.5 will be identified as key sectors (high point sectors) in Şanlıurfa.

Sectors Besides the Agriculture Sector include Industry sector and Services Sector. Sub sectors are as follows:

Industry Sectors: Manufacturing Industry (D); Electricity, Gas and Water (E); and Construction (F)

Service Sectors : Wholesale and Retail trade (G) ; Hotels and restaurants (H), Transportation, Storage and Communication (I), Activities of Financial Intermediary Institutions (J), activities of Real estate, Renting and Business (K), Education (M), Healthy Affairs and Social Services (N), Other Social and Private Activities (I)

The sector level data that used is from two sources: Firstly, from the “Manufacturing Industry Surveys” and 1992 and 2002 “General Census Of Industry And Business Establishments” provided by the State Statistics Institute of Turkey. The second data source will be Chambers of Industry and Trade of Şanlıurfa. The data is based on four digits Nomenclature of Economic Activities (NACE).

Empirical Results

- High Point Sectors in Industry

As seen in Table 10, 19 High Point Industries have been identified in Şanlıurfa Region’s Manufacturing Industry. The main high point sectors identified are basically in food products and in the textile sector.

Food Industry, the high point sector with the highest LQ value is Manufacture of Dairy Products (code. 1551; LQ = 21.26). Other high point sectors with high LQ values are Manufacture of Bakery Products (1581) and Manufacture of Vegetable and animal oil and fats (1541).

Textile Industry, Only one high point sector, preparation and spinning of cotton type fibers (1711) has been identified. As indicated above Urfa is the major cotton producer in Turkey. 1711 sector constitutes the first stage in textile production and most of the companies among the 57 sited in the table are mainly cotton fibers spinning factories. The share of identified high point food industries and textile industry within the total manufacturing employment is (54.1 %). The share of these within the total number of establishments in manufacturing industry accounts to (35.2 %).

Other high points industries identified are those sectors that provide input to the fast developing construction sector which accounts for 11% of the GDP in Şanlıurfa. These high point sectors are manufacture of builder’s carpentry (2640), manufacture of bricks and tiles and construction products in clay (2661) and manufacture of plaster products for construction (2662).

Treatment and coating of metals (2851) is another key industry with a high LQ (4.2) value identified in Urfa. Urfa with its very rich cultural and religious heritage and historical places is an important tourist site in the South Eastern Anatolia. The high LQ values of 2851 sector is due to the very lively souvenir products trade in the city. A majority of the souvenirs are made form various metals and especially form copper.

Manufacture of pumps and compressors (2912) and manufacture of other agricultural machinery are two other key sectors identified. The agriculture based structure of the province gives rise to development of these industries in the city.

In general, the share of the 19 high point manufacturing industries in the total manufacturing sector's employment of Şanlıurfa is as high as (74%). On the other hand, share of establishments of these sectors in the total number of establishments in the manufacturing industry is (67.2%).

In the industry sector, apart from the manufacturing industry, four sub-sectors are identified as key industries (high point sectors) in the region. Among these;

Construction of water projects (4524) is identified as having a very high LQ value (16.22). The significance of this industry is due to the South Anatolian Project - GAP and the Atatürk dam constructed in the region.

General Construction of Building and Civil Engineering Works (4521) is also another high point sector identified. This is due to the fact that Şanlıurfa has been receiving inward migration from the various provinces in the South Anatolian Region which gives rise to the flourishing of the constructions sector especially in the central province.

Table 10: Key Sectors in Şanlıurfa Industry Sector

MANUFACTURING INDUSTRY (D)	Codes	LQ Value	Number of Firms (unit)	Number of Employees
Manufacture of food products, beverages and tobacco				
- Manufacture of crude oils and fats	1541	2,615745	9	86
- Operation of dairies and cheese making	1551	21,26409	6	1727
- Manufacture of ice cream	1552	2,448733	9	19
- Manufacture of grain mill products	1561	2,556871	142	324
- Manufacture of bread; manufacture of fresh pastry goods and cakes	1581	6,210733	803	3315
Manufacture of textiles and textile products				
- Preparation and spinning of cotton-type fibres	1711	2,005054	57	966
Manufacture of wood and wood products				
- Manufacture of builders' carpentry and joinery	2030	2,540999	366	766
Manufacture of other non-metallic mineral products				
- Manufacture of bricks, tiles and construction products, in baked clay	2640	1,957132	57	189
- Manufacture of concrete products for construction purposes	2661	2,268367	8	121
- Manufacture of plaster products for construction purposes	2662	2,436588	5	22
- Manufacture of ready-mixed concrete	2663	1,857636	6	105
Manufacture of fabricated metal products, except machinery and equipment				
- Manufacture of builders' carpentry and joinery of metal	2812	2,452018	106	270
- Forging, pressing, stamping and roll forming of metal; powder metallurgy	2840	1,113881	47	105
- Treatment and coating of metals	2851	4,265273	183	317
Manufacture of machinery and equipment n.e.c.				
- Manufacture of pumps and compressors	2912	2,556782	19	92
- Manufacture of agricultural tractors	2931	1,19153	11	34
- Manufacture of non-electric domestic appliances	2972	1,900737	42	106
Manufacture of electrical machinery and apparatus n.e.c.				
- Manufacture of electric motors, generators and transformers	3110	1,946323	10	73

- Manufacture of jewellery and related articles n.e.c.	3622	1,315522	82	103
(D) - KEY MANUFACTURING SECTORS (D) TOTAL			1,968	8,740
ELECTRICITY, GAS, WATER (E) and CONSTRUCTION (F)				
- Collection, purification and distribution of water	4100	1.12955	8	224
- Test drilling and boring	4512	1.595	7	14
- General construction of buildings and civil engineering Works	4521	2.03	67	1993
- Construction of water projects	4524	16,2211	3	794
- Other building installation	4534	1.45	32	47
Key sectors in E and F Total			117	3,072
Key Sectors in D, E and F Total			2,085	11,812

- High Point Sectors in Services

We identified two main services sectors that have LQ values greater than 1.5. These are

Code	SECTORS	LQ value
G	Wholesale and Retail Trade	1.87
I	Communication and Transportation	1.85

Most of the sub sectors within these two sectors have LQ values greater than one. Those subsectors that have LQ values greater than two are as follows (see Annex for LQ values of the sectors)

Services Sectors Having Lq Value Greater Than Two:

- Sale, maintenance and repair of motorcycles and related parts and accessories 5040
- Agents involved in the sale of furniture, household goods, hardware and ironmongery 5115
- Agents involved in the sale of food, beverages and tobacco 5117
- Wholesale of grain, seeds and animal feeds 5121
- Wholesale of dairy produce, eggs and edible oils and fats 5133
- Non-specialized wholesale of food, beverages and tobacco 5139
- Retail sale of meat and meat products 5222
- Retail sale of textiles 5242
- Freight transport by road 6024

Wholesale and Retail Trade, is a sector that has been growing in the recent years both in terms of its share in GDP of the region and also in employment. Its share has increased from 40% in 2004 52% in 2006. On the other hand the key sectors identified in our analysis are those services sectors that have a close input-out relationship with the agriculture sector such as wholesale of seeds, dairy products, retail sale of meat and meat products and textiles.

Freight Transport by Road has been found to have a very high LQ value (4.08). The main reason of this high share is due to the fact that Şanlıurfa is situated on the main road between Mersin Port and Habur Customs Gate to Iraq. In the recent years military equipment and food stuff arriving at Mersin Port are transported by road to Iraq through the Habur gate. On the other hand after the competition of reconstruction Works at Akçakale Customs Gate which is on the border between Şanlıurfa and Syria, freight Transport by road sector is expected to flourish even further.

Organic Agriculture and Şanlıurfa

It is estimated that organic agriculture is carried out in more than 24 million hectares all over the world. The biggest parts of this area is in Australia (nearly 10 million hectares), Argentina (nearly 3 million hectares) and Italy (nearly 1.2 million hectares). While Australia has 42% of the organic agriculture area in the world, North America follows it although Latin America and Western Europe ranked first in the world for a long time in terms of organic food and beverage market. The sale of organic products reached 10.5 billion Dollars by increasing 8% in 2002. In 2002, Germany, the biggest market in

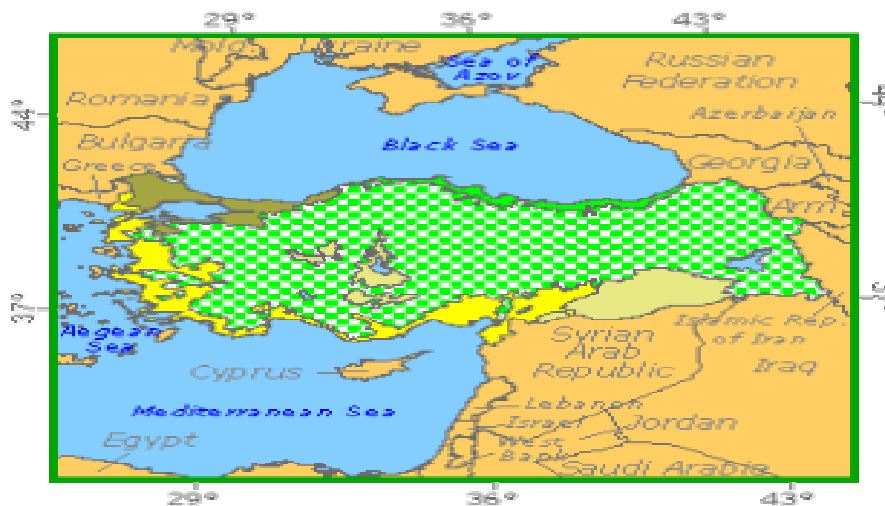
Europe, spent 3.06 billion Dollars for organic agriculture; England, the third biggest market in the world spent 1.5 billion Dollars; and the markets of Italy and France spent 1.3 billion Dollar. North America organic product market is the fastest growing one in the world.

The sale of organic food and beverages reached 11.75 billion Dollars with an increase of 12% in 2002. Although the second largest organic agriculture area is in Latin America, it has a very small market in terms of marketing of these products (Turkishtime, 2004).

According to the estimations, the world's trade volume regarding organic products will increase from 11 billion Dollars to 100 billion Dollars within the next 10 years. Actors both public and private all around the world and especially in European countries, have realized the huge potentials this sector may offer and hence organic agriculture promises huge development prospects in the future

Ecologic Agriculture Organization Association (ETO) was established in 1992 in order to materialize a sound ecologic (organic) agriculture movement in Turkey. "II. Conference on Ecologic Agriculture in Mediterranean Countries" was held in İzmir by ETO within the same year. With the initiation of a new perspective on ecological agriculture in Turkey, İzmir city has become the leading center of this movement. Currently 12.275 organic producers produce 168.306 tons of 92 different types of ecologic products cultivating on a 46.523 hectare land area. Although there is lack of accurate data regarding net contribution of ecologic agriculture sector to the economy via exports which is due to various problems in customs legislation, it is estimated that this figure is nearly 150 million dollars.

Map 2: Ecological Zones in Turkey by FAO



Organic Agriculture in Şanlıurfa¹

After 1995 with the introduction of GAP irrigated farming (as contrary to dry farming) became widespread in Şanlıurfa. Majority of the farmers started to plant cotton, which had a ready market outside hence spectacular increases in cotton production. However as a result of excessive irrigation, serious problems emerged such as salinity, drought and pollution of the soil through pesticides

The eligible areas for organic agriculture in Şanlıurfa province are in Siverek, Karacadağ, Bozova, Birecik, Akziyaret, Viranşehir, Hilvan geographic borders. On the other hand after the removal of land mines, a very large area suitable for organic agriculture will be obtained.

Map 3: Organic Agriculture Zone in Şanlıurfa



Organic Agriculture Products in Şanlıurfa

Medical and Aromatic Plants

Anasone, Fenugreek, Cummin, Coriander, Mint (*Mentha Piperita* L. or the plant named as English mint has pharmacologic peculiarities and Turkey exports this product.), Thyme, Crocus (The market value of per kilo is almost 2000 USA Dollars. Its added value is quite high and it is in line with genetic material of Şanlıurfa. It can only grow around Safranbolu in Turkey. The pilot production of this plant was carried out by GAP- (Agricultural Development Önder Çiftçi Consultancy Association.)

Nuts

Pistage, Almond, *Industrial Plants*, Cotton, Corn, Soy bean.

¹ GAP-GİDEM Entrepreneur Support Centers have been carrying out cluster analysis in the South-eastern Anatolia Region within the framework of EU-GAP Regional Development Programme 2002-2007 and in collaboration with UNDP. The below information is based on the findings of the Report on Organic Agriculture Clusters in Şanlıurfa (Bulu and Eraslan 2004)

Fruit trees

Fig, Grapes, Plum, Olive.

Vegetables

All kinds of vegetables can grow. The vehicles having “interfolding” feature is necessary in order to transport the vegetables.

Cereals and Grain

Barley, Wheat, Lentil, Chickpea.

Natural Flora

Reverse/Crying Tulip (The liquid that comes out from the plant represents the tears of Virgin Mary.)

Organic Husbandry

As it may be known, crop shift is necessary for organic agriculture. Within this context, fodder crops are advised as alternative products. “Fodder cost” in husbandry constitutes 70% of the total cost. Hence the product obtained from fodder crops during organic agriculture application will be used in organic fodder production, and in line with this practice, organic husbandry will improve in the region.

On the other hand the sub sectors of poultry and apiculture could not improve since the climate and geographic conditions of the region impede those. Only in Karacadağ area, there is an environment known as suitable for apiculture, and small scale apiculture is carried out there.

State of the Art

In Şanlıurfa Province, there are a limited number of producers producing via utilizing organic agriculture method. The products are as follows: medical and aromatic plants such as mulberry, pomegranate, tomato, grapes, wheat, soy bean, nigella, and pistachio and spices. Ceylanpınar is pretty suitable for organic milk.

Actors in Şanlıurfa Organic Agriculture Group

A) Producers

Companies of Roza Ecologic Agricultural Nutrition Products Corp. and Selim Uludağ Organic Agriculture Corp., and farmers; İbrahim Ethem Polat and Mehmet Emin Yıldırım carry out organic agriculture. General Directorate of Ceylanpınar Agriculture Enterprise produces organic cotton and peanut as a trial. Moreover Koç-Ata-Sancak Nutrition and Agricultural Products Corp. operating as one of the most modern agriculture enterprises in the region has the potential yet it has no organic agriculture activity.

B) Non Governmental Organizations:

- *GAP Agricultural Development Önder Çiftçi Consultancy Association*
- *GAP Sustainable Agricultural Development Association*
- *AGRO-GAP Önder Çiftçi Consultancy Association*

C) DATA generating Institutions

- *Harran University, Faculty of Agriculture*
- *Siverek Vocational School of Higher Education*

D) State and Public Institutions

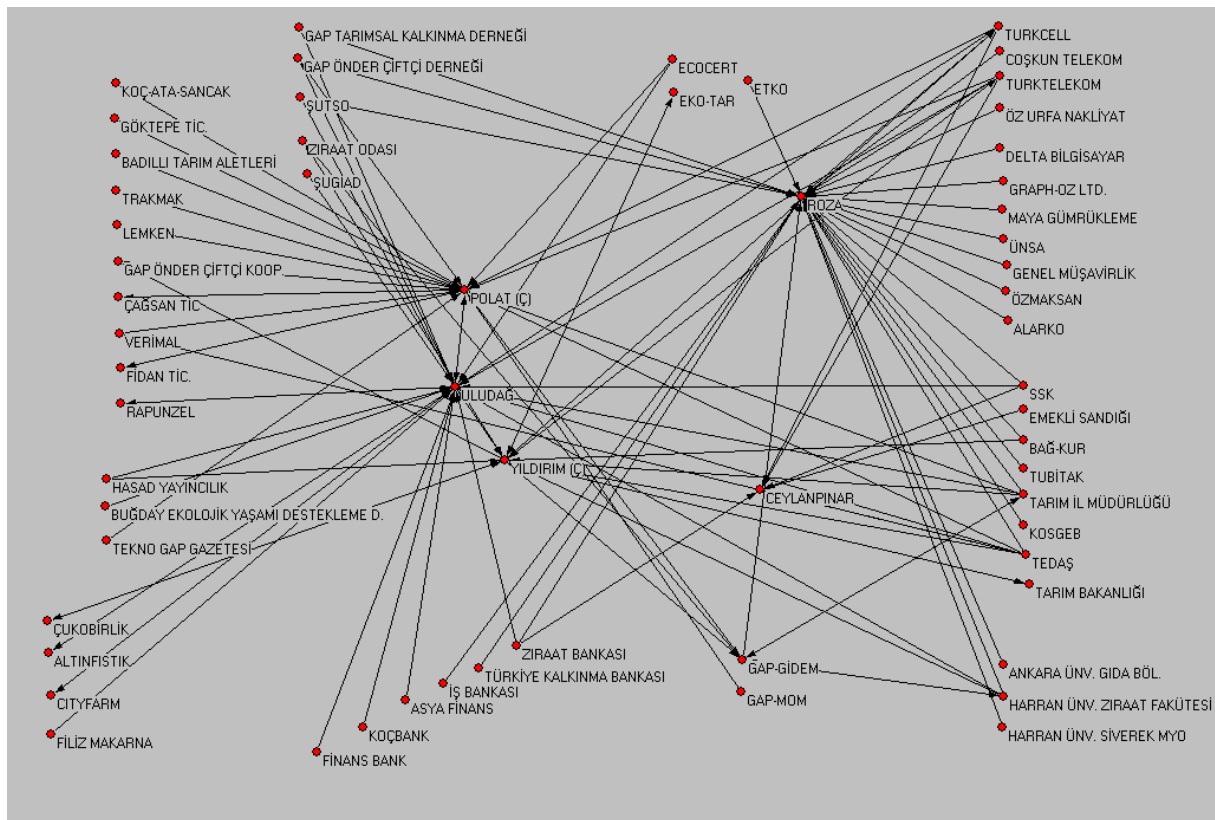
- *GAP - GİDEM*
- *Provincial Directorate of Agriculture*
- *Social Security Authority (SSK)*
- *Social Security Organization for Artisans and Self Employed (Bagkur)*

E) Other Institutions

- *Şanlıurfa Trade and Industry Chamber (ŞUTSO)*
- *Şanlıurfa Young Businessman Association (ŞUGİAD)*

F) Customers

Map 3: Şanlıurfa Cluster Map



Source: Bulu and Eraslan, 2004.

- Major players, namely producers are limited
- The relations with certification organizations are weak
- Financing demand: Banking sector is advanced in the region yet new financing opportunities may be provided
- There is no adequate network with NGOs but there are relations between them
- There are few customers and most of them are domestic. This field should be certainly improved.
- The relations with data generating institutions are very weak
- There is adequate infrastructure that will meet energy demand
- The relation with GİDEM is developed
- There is quite limited relation with TÜBİTAK

According to the level analysis in grouping, the density of the other players; particularly public institutions and data generating institutions is relatively limited. It is of great importance that these players have active roles in terms of sound development of grouping in long run. For instance, there is only one network with TÜBİTAK.

Moreover, the density figure is 0.0376. The value of density is very close to zero. This demonstrates us that there is a limited relation between players. However, in spite of the fact that this situation indicates a weak grouping, it is seen that there is a serious potential to be acquired by enhancing the relations between players.

Findings and Conclusion

The challenges facing Şanlıurfa regarding its economic development is not unique, they are the same challenges found in rural areas all around the world. Although agriculture is still the most important economic sector in Şanlıurfa (with 42% of the population living in rural areas and the agriculture's share in regions GDP amounts to 43%), it is producing fewer and fewer jobs. This is evident from the fact that the employment share of agriculture has fallen from nearly 48% in 2004 to 26% in 2006 in TRC2 region. The region suffers from the highest outmigration rates all over Turkey. Declining employment opportunities in agriculture, inadequate access to education and leisure facilities and declining job opportunities in the public sector employment due to recent climate of fiscal restraint are among the main reasons of high rates of outmigration.

New regional development approaches and policies are responding these challenges in many different ways; and successful policies appear to have some common traits. First, regional policy in rural areas shifts from a focus on individual sectors (such as farm policy) to one based on territories or regions which involves coordination of policies at the regional level. Second the coordination of policies at the regional level often means forming partnership among various public departments and agencies, knowledge producing institutes as well as private and non profit sectors. (M.Pezzini, 2001). Third, regarding the identification of the sectors that have high growth potentials in the region and also the relevant policies to be implemented, "cluster" approaches have proved to be successful.

One important feature of Şanlıurfa is that due to its agricultural basis, rich land endowment, suitable climate and clean and arable land the region has high potentials for the improvement of organic agriculture sector. As a matter of fact local public departments and agencies consider the improvement and hence support of organic agriculture to enhance the region's economy. (M. Sayın, 2000). The organic cluster map study carried out by GAP- GİDEM- Eastern Anatolian Project Entrepreneur Support Centers, reveals that there is a strong potential for the improvement of organic agriculture, however the network relations between the possible actors of an organic cluster are still weak.

Based on this background, this paper tried to find out the development potentials of an **agro-industry cluster** based on organic agricultural commodities in Şanlıurfa. The findings of the study based on LQ analysis and regarding the identification of high point industries (key sectors) in the industry and services sectors of Şanlıurfa, reveal that there is a strong potential for the improvement of an industrial structure based on organic agricultural products.

Our findings reveal that the majority of the key sectors of **industry** in Şanlıurfa are concentrated in either manufacturing of food products or preparation of textile fibres, industries that have their basic inputs obtained from the agriculture. The following list shows the key industries in Şanlıurfa revealing high LQ values

Key Industries	LQ Values	Basic Inputs from Agriculture
Manufacture of crude oils and fats	2.6	Sesame, corn and cotton
Manufacture of dairy products	21.1	Milk
Manufacture of Grain Mill products	2.5	Wheat
Manufacture of bread, Pastery and bread	6.2	Wheat
Preparation and Spinning of Cotton type fibres	2.0	Cotton

On the other hand the findings also support the fact that the majority of the key sectors identified in the **services** sector are involved in wholesale and retail trade of food and textile industry products. Services sectors with LQ values greater than 2 are:

- Agents involved in the sale of food, beverages and tobacco (code: 5117)
- Wholesale of grain, seeds and animal feeds (code:5121)
- Wholesale of dairy produce, eggs and edible oils and fats (code: 5133)
- Non-specialized wholesale of food, beverages and tobacco (code: 5139)
- Retail sale of meat and meat products (code: 5222)
- Retail sale of textiles (code:5242)

Clusters include spillovers of knowledge and enhance collective learning hence they play a crucial role in promoting innovation and entrepreneurial dynamics. Clusters are important because they allow companies to be more productive and innovative than they could be in isolation. The major actors of clusters are buyers and sellers interconnected to each other in a value added chain with forward and backward linkages. The key sectors identified in the industry and services sectors of Şanlıurfa demonstrate that such a value added chain of buyer - seller relations exists between these key industries and the conventional agricultural product sectors.

Past development policies tended to focus on rural areas as one uniform block treating them as homogenous with similar problem and opportunities and the policy design and implementation were basically based on subsidizing one sector such as the farming sector. Such an approach no longer reflects the present development opportunities for rural regions. Because each rural region have certain characteristics and resources – as geographic location, topography and climate, natural resource endowments, industrial heritage and endowments of human, physical and social capital - that shape their development trajectory and potential (M. Pezzini, 2001). Together with the new impetus in regional development policy there is a shift from an approach based on subsidizing sectors to one based on strategic investments and hence identification of possible development strategies per type of region.

In the light of the analysis carried out in this study and also of the new approaches in regional development policy, this paper lends support to the following three issues for Şanlıurfa Region:

First, agriculture still plays an important role in shaping the economy of Şanlıurfa and it remains as a wellspring of support for development. However, this would make sense if agriculture were conceived more as part of a restructuring process towards a multisectoral approach than as a traditional sector being subsidized.

Second, bearing in mind that the local public departments and agencies in Şanlıurfa give priority to the development of organic agriculture sector and cluster formation in shaping regions' development, organic agriculture cluster will constitute one component of such a multisectoral development strategy.

Third, the findings of this paper's reveal that there is great scope for the development of **agro-industry sectors** based on organic agriculture commodities, hence investments and support policies for the formation of an agro-industry cluster may constitute another component of such a multisectoral development strategy for Şanlıurfa.

References

Antonelli, Christiano (2003) “Knowledge Complementary and Fungebility: Implications for

Regional Dstrategy”, *Regional Studies*, Vol.37. 6&7, August/October, pp.595-606.

Akgüngör, Sedef, N.Kumral and A.Lenger (2003) “National Industry Clusters and Regional

Specialization in Turkey”, *European Planning Studies* Vol.11, No 6, September, pp.647-668.

Akgüngör, Sedef (2003) “Exploring Regional Specialization in Turkey’s Manufacturing Industry”, *Reinventing Regions in the Global Economy*, Paper Prepared for Presentation at the

Regional Studies Association International Conference, 12th-15th April, Pisa, Italy.

Bulu ve Eraslan (2004) Şanlıurfa Organik Tarım Kümelenme Analizi Raporu, GAP-GIDEM, Şanlı Urfa

DTI- Department of Trade and Industry (2001) Bussiness Clusters in the UK, Volume 3

DTI- Department of Trade and Industry (2001) UK Clusters: Performances, Policies, Emergent Issues, No.3

GAP İdaresi (2003) Şanlıurfa İli Ekosistemine Uygun Tarımsal Ürünler Raporu, Ankara.

GAP Türkiye: <http://www.gapturkiye.gen.tr/il/sanliurfa.html>

Gap’ta Organik Tarım, (2003) Şanlıurfa, Gap Gidem Yayınları.<http://www.ankara-tarim.gov.tr/diger/organik/organik.htm>

Krugman, P. (1991), Increasing Returns and Economic Geography. *Journal of Political Economy*, Vol: 99, pp. 484-99.

Krugman, P. (1998), What is new about The New economic Geography?. *Oxford Rewiev*, 14,2

Kumral, Neşe and Ç. Değer (2003) “An Industrial Cluster Study: As a Basis for the Aegean

Region’s Development Policy”, A Paper for “*Reinventing Regions in the Global Economy*”

Regional Studies Association, 12th-15th April , Pisa Congress Center, Pisa, Italy.

Pezzini, M. (2001), “Rural Policy Lessons from OECD Countries” *International regional Science Review*, Vol.24, No. 1, pp. 134-145.

Porter, M.E. (1990), *The Competitive Advantage of Nations*, London: Macmillan.

Porter, Michael E. (1998) “On Competition”, A Harvard Business Review Book.

Sayın, M. (2006) “Yerel Ekonomik Kalkınma İçin Model Önerisi”, Bölgesel Kalkınma ve Yönetişim Sempozyumu, ODTU.

Şengül ve Ersoy (2004) Şanlıurfa Kentinde Yoksulluk, ODTU

Şanlıurfa Genç İşadamları Derneği (ŞUGİAD), <http://www.sugiad.org.tr>

Şanlıurfa Tarım İl Müdürlüğü Yayınları.

Şanlıurfa Ticaret ve Sanayi Odası (ŞUTSO) Yayınları, TŞOF Plaka Matbaacılık A.Ş., Ankara. <http://www.sutso.org.tr>

Şanlıurfa Valiliği: <http://www.sanlıurfa.gov.tr/ilceler/ceylanpinar/>

TUSIAD and DPT (2005) “Türkiye’de Bölgesel Gelişme Politikaları Sektör-Bölge Yığılma Politikaları”, *TÜSİAD Büyüme Stratejileri Dizisi*, No:4 Eylül, Yayın No. TUSIAD-T/ 2005-09/408.

Turkishtime, Orada bir Pazar var Uzakta, Türkiye İhracatçılar Meclisi Yayın Organı, 15 Nisan 2004. http://www.turkishtime.org/27/98_tr.asp

Türkiye’de Organik Tarımın Geliştirilmesi ve Yasal Düzenlemelerin Güncelleştirilmesi Çalıştayı, 21-22 Ocak 2004, Ankara

Appendix:

Codes of All Sector (Agriculture excluded)

C	C – Mining
D	D – Manufacturing
E	E – Electricity, Gas and Water
F	F – Construction
G	G – Wholesale and Retail Trade
H	H – Hotels, Restaurants
I	I – Transportation, Communication and Storage
J	J – Activities of Financial Intermediaries
K	K – Activities of Real Estate, Renting and Business
M	M – Education
N	N – Health Services and Social Services
O	O - Other Social and Personal Service Activities.

LQ Values of South Eastern Anatolia Provinces

	Adıyaman	Diyarbakır	ŞANLIURFA	Gaziantep	Kilis	Batman	Mardin	Siirt	Şırnak
C	0,960040202	0,75383	0,021158505	0,02887601	0	14,92483931	0,54036106	0	6,661757613
D	0,833825159	0,49877	0,686588001	1,461964956	0,77053548	0,316379861	0,389170675	0,401559492	0,203610065
E	1,349423199	2,06979	1,383	1,111297091	1,2793593	3,972229745	2,06142072	2,995452166	2,217218032
F	0,276626199	0,86853	1,8720	0,432922184	1,17203513	0,67438393	0,57921049	1,808098846	0,122809447
G	1,334440244	1,29268	1,3006	0,957868919	1,325022797	1,156697609	1,330260476	1,409736051	1,58847692
H	0,806300068	1,3909	0,664818571	0,609161988	0,794090056	1,062446102	0,80231181	1,163784149	0,890586833
I	1,453751	1,5665	1,8557	0,650152845	1,40554435	1,444889584	2,893630688	1,633837933	2,19511661
J	0,493820	0,74149	0,5578150	0,405080079	0,606171107	0,336514153	0,865843366	0,846290161	0,885174187
K	0,382346	0,77489	0,3541285	0,478592266	0,323739544	0,374641406	0,406899758	0,229543853	0,335874443
M	0,742014	1,3071	0,391332472	0,613351522	1,289786203	1,032441749	0,761802938	0,867100663	0,472849506
N	0,674317	1,0305	0,900675915	1,109713346	0,476573617	0,497933697	0,684346226	0,853826986	0,554624953
O	1,284323	1,1490	0,882878919	0,97187459	1,550645723	0,932073002	0,806667383	1,347324101	0,655912774

Key sectors and LQ Values in Services Sector in Şanlıurfa

Sector Code	Sub-Sector Code	Explanation	Employment	LQ Value
G	5010	Sale of motor vehicles	411	1,432949561
G	5020	Maintenance and repair of motor vehicles	1720	1,543789768
G	5040	Sale, maintenance and repair of motorcycles and related parts and accessories	121	2,998508614
G	5050	Retail sale of automotive fuel	776	1,444599375
G	5111	Agents involved in the sale of agricultural raw materials, live animals, textile raw materials and semi-finished goods	26	1,303299613
G	5112	Agents involved in the sale of fuels, ores, metals and industrial chemicals	14	1,186709644
G	5115	Agents involved in the sale of furniture, household goods, hardware and ironmongery	17	5,026523007
G	5116	Agents involved in the sale of textiles, clothing, footwear and leather goods	3	1,424629515
G	5117	Agents involved in the sale of food, beverages and tobacco	459	4,019813858
G	5121	Wholesale of grain, seeds and animal feeds	345	2,682279199
G	5122	Wholesale of flowers and plants	26	1,158745941
G	5133	Wholesale of dairy produce, eggs and edible oils and fats	260	3,839284253
G	5139	Non-specialized wholesale of food, beverages and tobacco	400	4,044435756
G	5143	Wholesale of electrical household appliances and radio and television goods	151	1,139086407

G	5144	Wholesale of china and glassware, wallpaper and cleaning materials	124	1,488467759
G	5151	Wholesale of solid, liquid and gaseous fuels and related products	132	1,040916873
G	5152	Wholesale of metals and metal ores	55	1,011472327
G	5154	Wholesale of hardware, plumbing and heating equipment and supplies	90	1,0272274
G	5155	Wholesale of chemical products	61	1,109285065
G	5156	Wholesale of other intermediate products	23	1,233825477
G	5211	Retail sale in non-specialized stores with food, beverages or tobacco predominating	3859	1,461874619
G	5221	Retail sale of fruit and vegetables	162	1,476733685
G	5222	Retail sale of meat and meat products	793	3,190614143
G	5224	Retail sale of bread, cakes, flour confectionery and sugar confectionery	95	1,237778294
G	5231	Dispensing chemists	650	1,859456195
G	5233	Retail sale of cosmetic and toilet articles	65	1,028509507
G	5241	Retail sale of textiles	904	2,176826675
G	5242	Retail sale of clothing	873	1,006980944
G	5243	Retail sale of footwear and leather goods	408	1,644321153
G	5244	Retail sale of furniture, lighting equipment and household articles n.e.c.	678	1,274234633
G	5245	Retail sale of electrical household appliances and radio and television goods	409	1,137251658
G	5246	Retail sale of hardware, paints and glass	1038	1,113051974
G	5247	Retail sale of books, newspapers and stationery	249	1,031608788

G	5248	Other retail sale in specialized stores	1834	1,207741598
G	5250	Retail sale of second-hand goods in stores	58	2,081680231
G	5261	Retail sale via mail order houses	9	4,257760665
G	5271	Repair of boots, shoes and other articles of leather	123	1,856735686
G	5272	Repair of electrical household goods	618	1,762765097
G	5273	Repair of watches, clocks and jewellery	55	1,763931147
G	5274	Başka yerde sınıflandırılmamış tamirler	170	1,531617503
I	6021	Other scheduled passenger land transport	657	1,232531463
I	6023	Other land passenger transport	1277	1,839655341
I	6024	Freight transport by road	5217	4,048866278
I	6321	Other supporting land transport activities	246	1,656481886